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PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE HONORABLE BOARD OF PATENT APPEALS AND INTERFERENCES

In re the Application of

Steven R. Moore et al.

Group Art Unit: 2858

Application No.: 09/918,760

Examiner: H. Nguyen

Filed: August 1, 2001

Docket No.: 118011

For: BACKLASH REDUCTION

REPLY BRIEF

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In response to the Examiner's Answer mailed March 11, 2004, Appellants submit the following additional comments in response to specific points raised in the Examiner's Answer.

A. Narita

In the Examiner's Answer, the Examiner has maintained the rejection of claims 1-12 and 14-24 under 35 U.S.C. §102(b) as being anticipated by Narita (U.S. Patent No. 5,149,217). In responding to Appellants' arguments, the Examiner continues to improperly characterize the claimed invention and the teachings of Narita with respect thereto.

The Examiner references generally col. 2, lines 7-57, and more particularly lines 34-37 and 54-57 of Narita, at pages 8-10 of the Examiner's Answer and alleges that Appellants' arguments with respect to the 35 U.S.C. §102(b) rejection of the claims as being anticipated

by Narita are not deemed to be persuasive. However, Narita fails to disclose the backlash reduction apparatus or method of claims 1, 9, 16 and 24.

More specifically, the Examiner alleges that Narita teaches (1) "the medium feed roller can be stopped *at any selected position* by the clutch mechanism" (emphasis in original) when an electric current is supplied to the electromagnet clutch (see page 8, second paragraph and page 9, second paragraph of the Examiner's Answer and col. 2, lines 34-37 of Narita); and (2) "the feed roller can be *accurately and incrementally rotated in predetermined incremental steps due to the intermittent operation of the electromagnet clutch* of the medium feed mechanism" (emphasis in original) when an electric current is not supplied to the electromagnet clutch (see page 9, third paragraph of the Examiner's Answer and col. 2, lines 54-57 of Narita).

Appellants acknowledge that Narita discloses that a medium feed roller may be stopped at a selected position and that the feed roller can be incrementally rotated in predetermined incremental steps. However, this disclosure is merely directed to a feed mechanism capable of feeding different mediums in predetermined incremental amounts in stepped values (i.e., to each of the next print lines) and is not directed to backlash reduction. More specifically, Narita merely teaches that the feed roller may be stopped and may be incrementally rotated. Each of independent claims 1, 9, 16 and 24, however, require advancing paper short of a particular point and then finally advancing, as by incrementally moving the paper in much smaller steps, to a final destination. Specifically, each of independent claims 1, 9, 16 and 24 claim a backlash reduction apparatus or method. Narita fails to disclose reducing backlash.

The Examiner alleges, at pages 8-10 of the Examiner's Answer, that a selected position can be short of a position of which said position is defined as "a final intended position." The Examiner further alleges whether the backlash reduction takes place or not,

the invention as claimed has means for stopping advance of the substrate short of a final intended position and means for finally advancing the substrate, which is allegedly satisfied by the structural limitations taught by Narita. However, the Examiner fails to point out where such structural limitations exist in Narita.

Moreover, Narita clearly lacks means for stopping advance of the substrate short of a final intended position, and means for finally advancing the substrate after it was stopped short. More specifically, Narita lacks any teaching of the required functions associated with each of the recited means.

In this regard, the Examiner continues to incorrectly construe the claim term "final intended position" as being any selected position "short of a position of which said position is defined". Narita discloses that the medium feed roller can be stopped at a selected position, not that it is stopped at a distance short of the selected position and then finally advanced to a final destination, as required by each of claims 1, 9, 16 and 24. More specifically, Narita merely stops at each print line (final intended position), and nowhere teaches stopping short of an intended print line (at a non-print position) and thereafter advancing to the print line. The proper meaning of the present claim terms was extensively discussed at pages 4-5 of the Brief on Appeal. The Examiner has not addressed these arguments or otherwise supported the Examiner's different, incorrect construction of the claims.

As Narita fails to teach or suggest all of the limitations of each of the independent claims, Appellants respectfully submit that no *prima facie* case has been established for anticipation or obviousness.

B. Nureki

In the Examiner's Answer, the Examiner has maintained the rejection of claims 1, 3-12, 14, 16 and 18-24 under 35 U.S.C. §102(e) as being anticipated by Nureki (U.S. Patent No.

6,312,177). In responding to Appellants' arguments, the Examiner continues to improperly characterize the claimed invention and the teachings of Nureki with respect thereto.

The Examiner references col. 1 and the claims of Nureki at pages 10-11 of the Examiner's Answer and alleges that Appellants' arguments with respect to the 35 U.S.C. §102(e) rejection of the claims as being anticipated by Nureki are not deemed to be persuasive. However, Nureki fails to disclose the backlash reduction apparatus or method of claims 1, 9, 16 and 24.

The Examiner references col. 1, lines 67 to col. 2, line 1 wherein it is stated "an object of the invention is to provide a line printer" and alleges that Nureki therefore must have means for advancing a substrate and means for finally advancing a substrate (see pages 10 and 11 of the Examiner's Answer). However, providing a line printer is clearly not a disclosure of means for advancing a substrate and means for finally advancing a substrate, as required by each of claims 1, 9, 16 and 24.

The Examiner further cites col. 4, lines 32-34 (i.e., claim 1) of Nureki wherein it is stated "means for performing a stop printing operation to stop printing by turning off the motor after driving the motor in a reverse direction by a predetermined amount" and alleges that the stopped position can be short of a final intended position. (See page 11 of the Examiner's Answer). Here, the Examiner continues to incorrectly construe the claim term "final intended position" as being a stopped position "short of a position of which said position is defined".

However, nowhere does Nureki disclose stopping the substrate short of a particular point (print position), and then finally advancing the substrate, for example, by incrementally moving the paper in much smaller steps, to a final intended point (print position). That is, although Nureki describes a means to stop the substrate, nowhere does Nureki teach stopping the substrate short of a desired print position.

Nureki discloses that the printing operation may be stopped by turning off the motor after driving the motor in a reverse direction. This is not a teaching of advancing a substrate to a point short of a final intended position and finally advancing the substrate to the final intended position, as required by claims 1 and 16. Nor is this a teaching of a substrate advancer emitting control signals to a drive motor that cause the substrate to move to a point short of an intended destination, and a substrate final advancer in communication with the drive motor, the substrate final advancer sending control signals to the drive motor that cause the substrate to continue to the intended destination, as recited by claims 9 and 24.

The Examiner further cited col. 4, lines 35-37 (i.e., claim 1) of Nureki wherein it is stated "means for performing a start printing operation to start printing by driving the motor in a forward direction" when alleging that Nureki discloses finally advancing the substrate (see page 11 of the Examiner's Answer).

The means for performing a start printing operation to start printing is described in the specification of Nureki at col. 3, lines 11-12. According to the specification of Nureki, the CPU 101 judges whether the stepping motor 107 is turned off or not in step S301. The CPU 101 of Nureki judges whether the stepping motor is on or off, and then rotates the stepping motor if the stepping motor is turned off. Nowhere does Nureki disclose the CPU 101 finally advancing a substrate. Thus, Nureki also fails to teach finally advancing the substrate.

Contrary to the assertion made by the Examiner, nowhere does Nureki teach or suggest:

1. an apparatus that includes means for stopping advance of the substrate short of a final intended position and means for finally advancing the substrate, as recited in claim 1;
2. advancing a substrate to a point short of a final intended position and finally advancing the substrate to the final intended position, thereby taking up backlash in a substrate transport system, as recited in claim 16; and

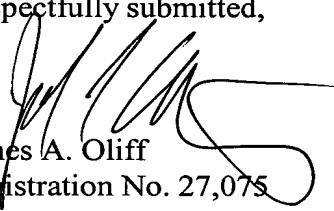
3. a substrate advancer emitting control signals to a drive motor that cause the substrate to move to a point short of an intended destination, and a substrate final advancer in communication with the drive motor, the substrate final advancer sending control signals to the drive motor that cause the substrate to continue to the intended destination, as recited by claims 9 and 24.

As Nureki fails to teach or suggest all of the limitations of each of the independent claims, Appellants respectfully submit that no *prima facie* case has been established for anticipation or obviousness.

C. Conclusion

For all the reasons stated in the Brief on Appeal, as well as the additional reasons set forth above, Appellants respectfully request this honorable Board to reverse the rejection of claims 1-24.

Respectfully submitted,


James A. Oliff
Registration No. 27,075

Joel S. Armstrong
Registration No. 36,430

Linda M. Saltiel
Registration No. 51,122

JAO:LMS/mlv

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OLIFF & BERRIDGE, PLC
P.O. Box 19928
Alexandria, Virginia 22320
Telephone: (703) 836-6400

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